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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/897,577	07/02/2001	Michael Emmett Doherty	8626	1238

27752 7590 11/03/2005

THE PROCTER & GAMBLE COMPANY
INTELLECTUAL PROPERTY DIVISION
WINTON HILL TECHNICAL CENTER - BOX 161
6110 CENTER HILL AVENUE
CINCINNATI, OH 45224

EXAMINER

MEINECKE DIAZ, SUSANNA M

ART UNIT PAPER NUMBER

3623

DATE MAILED: 11/03/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.	Applicant(s)	
09/897,577	DOHERTY, MICHAEL EMMETT	
Examiner	Art Unit	
Susanna M. Diaz	3623	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 July 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-36 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-36 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 July 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims 1-36 are presented for examination.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claim 12 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 12 recites that a vector of talking strengths is equal to "the matrix" times a vector of listening strengths. First, it is not understood what W ("the matrix") and its transpose represent. Second, matrices comprise vectors; therefore, it is not clear how a vector can equal another matrix, which results from the product of "the matrix" and another vector.

Because claim 12 is so indefinite, no art rejection is warranted as substantial guesswork would be involved in determining the scope and content of these claims. See In re Steele, 305 F.2d 859, 134 USPQ 292 (CCPA 1962); Ex parte Brummer, 12 USPQ 2d, 1653, 1655 (BdPatApp&Int 1989); and also In re Wilson, 424 F.2d 1382, 165 USPQ 494 (CCPA 1970). Prior art pertinent to the disclosed invention is nevertheless cited and applicants are reminded they must consider all cited art under Rule 111(c) when amending the claims to conform with 35 U.S.C. 112.

Appropriate correction is required.

Claim Rejections - 35 USC § 101

4. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

5. Claims 1-36 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

A practical application is not clearly set forth in claims 1-36, thereby bringing into doubt the usefulness of the invention. While communication strengths are determined, it is not expressly clear from the claims what concrete value these strengths are based on or what the vectors and matrices recited in claim 12 represented. Claims 22 and 24 recite that an encounter is initiated with an individual or connector; however, the scope of such an encounter is vague and does not clarify the usefulness of the invention. Therefore, claims 1-36 are deemed to be non-statutory for failure to recite a useful, concrete, and tangible result.

Additionally, claims 35-36 are directed toward a program product, but it is not expressly recited as executable. Furthermore, the program is stored on a signal bearing medium. Typically signals are stored on a signal bearing medium; therefore, it is unclear to which statutory class claims 35-36 are directed. It is presumed that Applicant intends to claim a computer program product; however, since the program product is not executable or stored on a computer-readable medium, claims 35-36 are deemed to be software *per se*, which is non-statutory.

Appropriate correction is required.

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Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1-11, 13-15, and 18-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Altschuler et al. (U.S. Patent No. 6,151,585) in view of Holtzman et al. (US 2002/0062368).

Altschuler discloses a method of assessing communication strength of individuals that participate in electronic communications, the method comprising:

[Claim 1] (a) inferring a plurality of electronic messages generated by a plurality of individuals to identify a plurality of conversations, wherein each conversation is associated with a talker and a listener, and wherein each talker and listener identifier by a conversation is selected from the plurality of individuals (abstract; figs. 3, 5, 11; col. 4, lines 17-29; col. 5, lines 21-30 -- Results of conversations are inferred);

(b) determining communication strengths of at least a subset of the plurality of individuals by modeling the plurality of conversations (figs. 3, 5, 11; col. 8, line 65 through col. 11, line 36); and

(c) selecting an individual from the plurality of individuals based upon the communication strength thereof (col. 3, lines 38-42; col. 8, line 65 through col. 11, line 36);

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[Claim 6] determining, from the plurality of conversations, a plurality of activity indicators, each activity indicator associated with first and second individuals from the plurality of individuals, and each activity indicator representing a level of messaging activity directed from the first individual associated with such activity indicator to the second individual associated with such activity indicator (figs. 3, 5, 11; col. 8, line 65 through col. 11, line 36);

[Claim 7] wherein each activity indicator comprises a conversation count representative of the number of conversations directed from the first individual associated with such activity indicator to the second individual associated with such activity indicator (figs. 3, 5, 11; col. 8, line 65 through col. 11, line 36);

[Claim 8] further comprising:

(a) identifying a first subset of the plurality of individuals as talkers for the purposes of the analysis based upon a talker criterion (figs. 3, 5, 11; col. 8, line 65 through col. 11, line 36); and

(b) identifying a second subset of the plurality of individuals as listeners for the purposes of the analysis based upon a listener criterion (figs. 3, 5, 11; col. 8, line 65 through col. 11, line 36);

[Claim 9] wherein modeling the plurality of conversations includes populating a matrix with activity indicators associated with messaging activity directed from the individuals identified as talkers based upon the talker criterion (figs. 3, 5, 11; col. 8, line 65 through col. 11, line 36);

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[Claim 10] wherein populating the matrix includes arranging in different areas of the matrix activity indicators associated with messaging activity directed to individuals identified as talkers based upon the talker criterion, and activity indicators associated with messaging activity directed to individuals identified as listeners based upon the listener criterion (figs. 3, 5, 11; col. 8, line 65 through col. 11, line 36);

[Claim 11] wherein determining the communication strengths includes simultaneously solving talking strengths and listening strengths for at least a subset of the plurality of individuals using the matrix (figs. 3, 5, 11; col. 8, line 65 through col. 11, line 36);

[Claim 13] scaling each activity indicator using a wearout factor prior to determining the communication strengths (col. 9, lines 22-30; col. 10, lines 58-63 -- Any factor that affects the determination of a communication strength, such as memory length time period, is a type of wearout factor);

[Claim 14] wherein determining the communication strengths determines a first set of communication strengths, and wherein the method further comprises determining a second set of communication strengths after scaling the activity indicators using a second wearout factor (col. 9, lines 22-30; col. 10, lines 58-63 -- Any factor that affects the determination of a communication strength, such as memory length time period, is a type of wearout factor. This process may be repeated for various talkers and listeners);

[Claim 15] generating a diagram that contrasts the first and second sets of communication strengths (figs. 3, 5, 11; col. 8, line 65 through col. 11, line 36);

[Claim 18] wherein modeling the plurality of conversations includes expressing from a model the propositions that a strong talker talks frequently to strong listeners, and that a

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strong listener listens frequently to strong talkers (figs. 3, 5, 11; col. 8, line 65 through col. 11, line 36);

[Claim 19] wherein determining the communication strength for an individual includes determining at least one of a talking strength and a listening strength for such individual (figs. 3, 5, 11; col. 8, line 65 through col. 11, line 36);

[Claim 20] wherein selecting an individual from the plurality of individuals based upon the communication strength thereof includes identifying the individual as a connector based at least upon the talking strength of such individual (col. 3, lines 38-42; col. 8, line 65 through col. 11, line 36);

[Claim 21] contacting the individual to perform a marketing activity therewith (col. 3, lines 38-42);

[Claim 22] initiating an encounter with the individual in a viral marketing context (col. 3, lines 38-42);

[Claim 23] performing market research with the individual (col. 3, lines 38-49).

Regarding claims 1-5, Altschuler infers that communications have taken place among talkers and listeners, "such 'communications' may be direct (e.g., in person, via mail, e-mail, telephone, video phone, etc.) or indirect (e.g., via hearsay conversation, television, print media, Internet posting, etc.)" (col. 4, lines 26-29) in order to perform talker-listener analysis. Altschuler's principle embodiment gathers such inferences based on resource usage log data (col. 5, lines 18-20), yet Altschuler describes

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alternate embodiments in which talker-listener relationships may be more directly observed and analyzed as follows:

There are a number of ways to gather data for determining the values of edges in the directed graph. The most direct way may be to ask users, by means of web-based questionnaires for example, (a) who they communicate with, (b) who they influence, (c) who communicates with them, and/or (d) who influences them. Unfortunately, this way of data gathering relies on users to volunteer information.

Another way to gather data for determining the values of edges in the directed graph may be to monitor "chat rooms" so that it can be determined who communicates with whom. "Newsgroups" may be monitored to identify those who start "threads" (i.e., a sequence of related communications). E-mail forwarding information can be used to determine who forwarded a communication to whom. Unfortunately, it is difficult to gather this data. Moreover, some users may have an expectation of privacy in their chat room, newsgroup, and e-mail communications, even if the content of their communications is not monitored. Such expectations of privacy may lead to legal or voluntarily placed limitations on such data gathering. Furthermore, although this data may indicate whom communicates with whom, it does not indicate user influence...

Thus, gathering "explicit" information to identify "influential rumormongers" is difficult. (Col. 4, line 58 through col. 5, line 18)

While the express (as opposed to inferred) analysis of a plurality of electronic messages generated by a plurality of individuals to identify a plurality of conversations is not Altschuler's preferred embodiment, it is disclosed as an option nonetheless.

Altschuler prefers to infer information from resource usage log data because the more explicit analysis techniques are "difficult" (col. 5, line 17-20). However, Holtzman's invention teaches a similar analysis of electronic messages to identify discussion

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leaders (§ 105) in various domains of interest (§§ 75-79) that are searchable and stored by topics in a central data store (fig. 1; §§ 12-13). Holtzman's invention provides the benefits of tracking individual users and analyzing their leadership roles across various electronic communities (§ 10). Since both Altschuler and Holtzman are directed toward identifying opinion leaders in marketing areas, the Examiner submits that it would have been obvious to one of ordinary skill in the art at the time of Applicant's invention to modify Altschuler's principle embodiment (and its modeling variations) to analyze a plurality of electronic messages generated by a plurality of individuals to identify a plurality of conversations (claim 1), harvest the plurality of electronic messages based upon a domain of interest (claim 2), wherein harvesting the plurality of electronic messages includes searching at least one message archive to identify the plurality of electronic messages and creating a local message archive from which information regarding the plurality of electronic messages can be obtained during analysis (claim 3), wherein the message archive from which the electronic messages are harvested includes at least one of a news archive, a forum archive, a mailing list archive, a chat archive, an instant messaging archive, a telephone record archive and an e-mail archive, and wherein each of the plurality of messages is selected from the group consisting of a message post, an email, a chat post, an instant message, and a telephone record (claim 4), and to select a study domain from the domain of interest based upon at least one study parameter (claim 5) in order to improve Altschuler's ability to track individual users and analyze their leadership roles across various

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electronic communities (as suggested in ¶ 10 of Holtzman), thereby generating more accurate analysis of talker-listener relationships.

[Claim 24] Claim 24 recites limitations already addressed by the rejection of claims 1 and 22 above; therefore, the same rejection applies.

[Claims 25-34] Claims 25-34 recite limitations already addressed by the rejection of claims 1-11, 13-15, and 18-23 above; therefore, the same rejection applies. The Altschuler-Holtzman combination discloses a fully computerized system.

[Claims 35-36] Claims 35-36 recite limitations already addressed by the rejection of claim 1 above; therefore, the same rejection applies. The Altschuler-Holtzman combination discloses a fully computerized system.

8. Claims 16 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Altschuler et al. (U.S. Patent No. 6,151,585) in view of Holtzman et al. (US 2002/0062368), as applied to claim 15 above, in view of Nakagawa et al. (U.S. Patent No. 6,414,691).

[Claims 16, 17] As per claims 16 and 17, neither Altschuler nor Holtzman expressly discloses the details of the types of diagrams recited in claims 16 and 17. However, Nakagawa makes up for this deficiency in his teaching of a graph that depicts affiliations among various members (abstract). For example, Figure 1 represents levels of affiliation among members using a diagram with first and second orthogonal axes as well as bubbles representing the affiliation degrees of the members. Nakagawa's background discusses how graphical displays using predetermined shapes and 3-D

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representations make it easier to compare and evaluate the graphed data (col. 1, lines 22-32). Nakagawa's invention utilizes these benefits to further make it easier to grasp and analyze correlations among the members of interest (col. 2, lines 16-22, 45-51). Similarly, the Altschuler-Holtzman combination analyzes relationships among talker and listener members; therefore, the Examiner submits that it would have been obvious to one of ordinary skill in the art at the time of Applicant's invention to further modify the Altschuler-Holtzman combination such that the diagram includes first and second orthogonal axes respectively representing the first and second sets of communication strengths, and wherein the diagram includes a plurality of data points, each representing the communication strengths in each of the first and second sets of communication strengths in each of the first and second sets of communication strengths determined for an individual from the plurality of individuals (claim 16), wherein the diagram further includes bubbles representing groups of individuals having like communication strength characteristics, wherein the size of each bubble is representative of the number of individuals within the group of individuals represented by such bubble (claim 17) in order to make it easier to grasp and analyze correlations among the members of interest (as suggested by Nakagawa in col. 2, lines 16-22, 45-51).

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

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Hawks (US 2005/0049908) -- Discloses a system for influence network marketing, which includes the generation of a sociogram depicting the influence network.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Susanna M. Diaz whose telephone number is (571) 272-6733. The examiner can normally be reached on Monday-Friday, 10 am - 6 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tariq Hafiz can be reached on (571) 272-6729. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Susanna M. Diaz
Primary Examiner
Art Unit 3623

November 1, 2005